

Random Key Generation and Application for Digital Watermark System", Serial
No. 08/587,944; and "Optimization Methods for the Insertion, Protection, and
Detection of Digital Watermarks in Digitized Data", Serial No. 081677,435

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In addition, the present invention improves upon the techniques of
5 digital watermark systems, described in the patent applications listed above, by
adding methods for the use of this information which allow for improvements in
the speed of performing a key search for watermarks within content, and by
allowing for more than one party to cooperate in adding distinguished
watermarks at various stages of distribution without destroying watermarks
10 previously placed in the content. At the same time, these methods minimize
the amount of information which any one party must divulge to another party,
and prevent "downstream" parties from compromising or otherwise gaining
control of watermarks embedded by "upstream" parties.

Further improvements of the present invention include the incorporation
15 of retail models using well-known commodities exchanges to accomplish more
efficient means of advertising, negotiating, and delivering digital goods in an
anonymous marketplace as commonly characterized by such systems as the
INTERNET. Video-on-demand models, quality of service reservations
considered in subscriber models, and related models that have been referred
20 to as "time shares" for parceling up processing time in a general computing
network will also be differentiated.

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